

WHAT IS CLAIMED IS:

1. A method for fabricating a metal line of a semiconductor device, comprising the steps
5 of:

forming an insulation layer on a semiconductor substrate on which devices or lower
lines are formed;

forming a metal layer on the insulation layer;

forming a photoresist pattern having an opening of certain width on the metal layer;

10 forming a buffer layer on the photoresist pattern; and

selectively removing the metal layer at a lower side of the opening by performing a dry
etching process.

2. The method of claim 1, further comprising a step of forming an organic anti-reflection
15 coating between the metal layer and the photoresist pattern.

3. The method of claim 2, wherein the buffer layer is made of an oxide film of PE family.

4. The method of claim 3, wherein the buffer layer is formed at a thickness of 180 to
20 230 Å.

5. The method of claim 4, wherein the metal layer comprises three layers of a lower
metal layer, an intermediate metal layer and an upper metal layer.

25 6. The method of claim 5, wherein the lower metal layer is made of TiN/Ti.

7. The method of claim 6, wherein the lower metal layer functions as a capping layer.

8. The method of claim 5, wherein the intermediate metal layer is made of Al-Cu alloy.

30 9. The method of claim 5, wherein the upper metal layer is made of TiN/Ti.

10. The method of claim 9, wherein the upper metal layer functions as a barrier layer.

11. The method of claim 3, wherein the dry etching process is performed by a plasma
etching using Cl_2/BCl_3 gases.

12. The method of claim 11, wherein the metal layer comprises three layers of a lower
metal layer, an intermediate metal layer and an upper metal layer.

13. The method of claim 12, wherein the lower metal layer is made of TiN/Ti.

14. The method of claim 13, wherein the lower metal layer functions as a capping layer.

15. The method of claim 12, wherein the intermediate metal layer is made of Al-Cu alloy.

16. The method of claim 12, wherein the upper metal layer is made of TiN/Ti.

17. The method of claim 16, wherein the upper metal layer functions as a barrier layer.